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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/092,446

03/08/2002

Satoru Tanaka

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05/28/2004

OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER

CHAUHAN, ULKA J

ART UNIT

PAPER NUMBER

2676

7

DATE MAILED: 05/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/092,446

Applicant(s)

TANAKA, SATORU

Examiner

Ulka J. Chauhan

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-12 are pending.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: the coupling between the peripheral device interconnection port, the graphics port, and the first memory necessary for the direct transfer of image data from the first memory to the print engine through the graphics port, interface unit and the peripheral device interconnection port.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out

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the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. **Claims 1, 2, 7, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art [0004-0008] (APA) and U.S. Patent No. 6,618,157 to Coyle et al.**

7. As per claims 1 and 2, APA discloses an image processing apparatus comprising a memory for storing drawing data connected to a print engine via an ASIC that is connected to AGP ("*a graphics port*") [0004], and a print engine coupled to the ASIC via a PCI bus ("*a print engine connected to the peripheral device interconnection port*") [Fig. 1]. APA further discloses that the CPU supplies drawing data to be stored in the local memory ("*a second memory*") and the memory for drawing ("*a first memory*") [0004 and Fig. 1]. And APA discloses that the print engine 1610 becomes the master of the PCI bus to read image data stored in the memory for drawing [0008]. APA does not expressly teach that the memory for drawing is *provided on a side of the graphics port* or that *transfers the image data from the first memory to the second memory through the graphics port so as to transfer the image data from the second memory to the print engine through the peripheral device interconnect port*. Coyle teaches a computer 2 comprising a motherboard 6 carrying a RAM 10 and an AGP interface card 12 mounted thereon, wherein the AGP interface card 12 is coupled to a digital copier 16 [c. 4 ll. 7-19, ll. 53-57, and Figs. 1 and 2]. Coyle also discloses that in outputting image data to the photocopier, data flows from the motherboard RAM 10 directly through AGP edge connector 22, through to controller chip 24, through to output FIFO data buffer 30, through to hardware chip

36, through to interface 46, and then to the digital copier 46 [c. 6 ll. 25-53]. Therefore, Coyle discloses that the memory for storing image data is provided on the side of the graphics port and image data flows from the memory through the graphics port. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined the teachings of APA and Coyle, to provide a system memory, RAM 10 as taught by Coyle, in the image processing apparatus taught by APA, whereby image data is transferred from the system RAM through the AGP to the print engine via the ASIC and the PCI. One would have been motivated to have made this modification in order to provide a memory with enough capacity to store a full document for printing and so that printing is performed at a higher rate by utilizing the AGP.

8. Claims 7 and 8 are similar in scope to claims 1 and 2, and are rejected under the same rationale.

9. **Claims 3-6 and 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art [0004-0008] (APA) and U.S. Patent No. 6,618,157 to Coyle et al and U.S. Patent No. 6,370,631 to Dye.**

10. As per claims 3-6, APA discloses that the ASIC generally has a compression function and a data transfer function [0004] ("*a compressor connected between the graphics port and the second memory*"). APA does not expressly teach a decompressor connected so that decompressed data is stored in the second memory or connected so that decompressed data is transferred from the first memory or the second memory. Dye teaches an integrated memory controller, IMC 140, comprising compression logic 302 and decompression logic 304, whereby the two logic function to store compressed or decompressed data to the system memory and to transfer compressed or decompressed data read out from the system memory [Figs. 7-15]. It

would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined the teachings of the APA, Coyle, and Dye whereby a decompression logic as taught by Dye is incorporated in the ASIC along with the compression function typically included in the ASIC. One would have been motivated to make such a modification so that decompressed data can be stored in the local memory disclosed by the APA or transferred to the print engine, as desired and as necessitated by data size and storage capacities of the memories.

11. Claims 9-12 are similar in scope to claims 3-6, and are rejected under the same rationale.

Response to Arguments

12. Applicant's arguments filed 3/19/04 have been fully considered but they are not persuasive. With respect to the claims, Applicant argues that the cited prior art does not teach the amended limitation of a first memory provided on a side of the graphics port with respect to the image data processing unit. Coyle teaches a computer 2 comprising a motherboard 6 carrying a RAM 10 and an AGP interface card 12 mounted thereon, wherein the AGP interface card 12 is coupled to a digital copier 16 [c. 4 ll. 7-19, ll. 53-57, and Figs. 1 and 2]; and wherein in outputting image data to the photocopier, data flows from the motherboard RAM 10 directly through AGP edge connector 22, through to controller chip 24, through to output FIFO data buffer 30, through to hardware chip 36, through to interface 46, and then to the digital copier 46 [c. 6 ll. 25-53]. Therefore, Coyle discloses that the memory for storing image data is provided on the side of the graphics port and image data flows from the memory through the graphics port. One would have been motivated to combine APA and Coyle in order to provide a memory with enough capacity to store a full document for printing and so that printing is performed at a higher rate by utilizing the AGP, as taught by Coyle.

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

14. The following prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 6344906 U.S. Patent No. 6425041 U.S. Patent No. 6564284

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Ulka Chauhan** whose telephone number is **(703) 305-9651**. The examiner can normally be reached Mon.-Fri. from 9:00 am to 4:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Matthew Bella**, can be reached at **(703) 308-6829**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

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Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,

Arlington, VA, Sixth Floor (Receptionist).

16. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 305-4700.



Ulka J. Chauhan
Primary Examiner
Art Unit 2676

ujc
May 26, 2004